

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-7. (Canceled)

8. (Currently Amended) A method for producing a single crystal by pulling a single crystal from a raw material melt in a chamber in accordance with Czochralski method, comprising pulling a single crystal having a defect-free region which is outside an OSF region to occur in a ring shape in the radial direction ~~and which~~ and in which interstitial-type and vacancy-type defects do not ~~exist in,~~ exist by controlling a V/G value as indicated by a growth rate (V) and a temperature gradient (G) near a growth interface, wherein the pulling of the single crystal is performed with being controlled so that an average of cooling rate in passing through a temperature region of the melt point of the single crystal to 950 °C is in the range of 0.96 °C/min or more and so that an average of cooling rate in passing through a temperature region of 1150 °C to 1080 °C is in the range of 0.88 °C/min or more and so that an average of cooling rate in passing through a temperature region of 1050 °C to 950 °C is in the range of 0.71 °C/min or more.

9. (Currently Amended) The method for producing a single crystal according to ~~Claim 1,~~ claim 8, wherein a growth rate margin for pulling the single crystal having a defect-free region (an upper limit of the growth rate – a lower limit of the growth rate) is in the range of 7% or more of a growth rate average of the single crystal ((the upper limit of the growth rate + the lower limit of the growth rate) ÷ 2).

10. (Currently Amended) The method for producing a single crystal according to ~~Claim 1,~~ claim 8, wherein the controlling of the temperature region for pulling the single

crystal is performed by arranging at least a cooling cylinder to be forced cooled with a cooling medium and an auxiliary member for cooling in the chamber.

11. (Currently Amended) The method for producing a single crystal according to ~~Claim 2,~~ claim 9, wherein the controlling of the temperature region for pulling the single crystal is performed by arranging at least a cooling cylinder to be forced cooled with a cooling medium and an auxiliary member for cooling in the chamber.

12. (Currently Amended) The method for producing a single crystal according to ~~Claim 1,~~ claim 8, wherein the single crystal to be produced is a silicon single crystal.

13. (Currently Amended) The method for producing a single crystal according to ~~Claim 2,~~ claim 9, wherein the single crystal to be produced is a silicon single crystal.

14. (Currently Amended) The method for producing a single crystal according to ~~Claim 3,~~ claim 10, wherein the single crystal to be produced is a silicon single crystal.

15. (Currently Amended) The method for producing a single crystal according to ~~Claim 1,~~ claim 8, wherein a diameter of the straight body of the single crystal is 150 mm or more.

16. (Currently Amended) The method for producing a single crystal according to ~~Claim 2,~~ claim 9, wherein a diameter of the straight body of the single crystal is 150 mm or more.

17. (Currently Amended) The method for producing a single crystal according to ~~Claim 3,~~ claim 10, wherein a diameter of the straight body of the single crystal is 150 mm or more.

18. (Currently Amended) The method for producing a single crystal according to ~~Claim 1,~~ claim 8, wherein the pulling of the single crystal is performed with applying a magnetic field of a central magnetic field strength in the range of 300 gauss to 6000 gauss.

19. (Currently Amended) The method for producing a single crystal according to ~~Claim 2,~~claim 9, wherein the pulling of the single crystal is performed with applying a magnetic field of a central magnetic field strength in the range of 300 gauss to 6000 gauss.

20. (Currently Amended) The method for producing a single crystal according to ~~Claim 3,~~claim 10, wherein the pulling of the single crystal is performed with applying a magnetic field of a central magnetic field strength in the range of 300 gauss to 6000 gauss.

21. (Currently Amended) A single crystal produced by the method according to ~~Claim 1,~~claim 8.

22. (Currently Amended) A single crystal produced by the method according to ~~Claim 2,~~claim 9.

23. (Currently Amended) A single crystal produced by the method according to ~~Claim 3,~~claim 10.